

## **AMENDMENTS**

### **In the claims:**

Claims 1-57 (Cancelled).

58. (New) A method for producing avian stem cell lines, the method comprising culturing avian embryonic stem cells in successive passages of a culture medium, wherein in at least the first passage,

(a) the avian embryonic stem cells are cultured in a primary medium comprising:

- (i) at least the growth factors (trophic factors) SCF, IGF-1 and bFGF, and at least one cytokine selected from the group of LIF, IL-11, IL-6, CNTF, oncostatin and cardiotrophin;
- (ii) an inactivated feeder lawn of STO cells; and
- (iii) fetal calf serum at a concentration of 12-8%; and

wherein in subsequent passages,

- (b) the avian embryonic stem cells are cultured in the primary medium that has been modified by progressively depriving the primary medium of said growth factors; and thereby
- (c) producing adherent or nonadherent cell lines capable of proliferating in a basal medium in the absence exogenous growth factors.

59. (New) The method of claim 58, wherein the primary culture medium comprises:

- (i) at least the growth factors (trophic factors) SC, IGF-1 and bFGF, and
- (ii) at least the cytokines IL-6, CNTF and IL-11.

60. (New) The method of claim 58, wherein in step b), the primary culture is further progressively deprived of the feeder lawn and/or the concentration of

fetal calf serum in the primary culture is progressively decreased to reach a low concentration of 2%.

61. (New) The method of claim 58, wherein the cells derived from the lines obtained in step (c) are capable of proliferating for at least 50 days.
62. (New) The method of claim 58, wherein the cells derived from the lines obtained in step (c) are avian stem cells.
63. (New) The method of claim 58, wherein the cells derived from the lines obtained in step (c) are avian embryonic stem cells.
64. (New) The method of claim 58, further comprising step (d) proliferating the adherent stem cells of step (c) in the absence of the inactivated feeder lawn.
65. (New) The method of claim 58, further comprising step (d) proliferating in suspension the nonadherent stem cells derived from the lines obtained in step (c).
66. (New) The method of claim 58, further comprising step (d) proliferating in suspension the nonadherent stem cells derived from the lines obtained in step (c) in a medium free of exogenous growth factors.
67. (New) The method of claim 58, wherein the cells derived from the lines obtained in step (c) proliferate in a serum-poor medium.
68. (New) The method of claim 58, wherein the cells derived from the lines obtained in step (c) have at least one characteristic selected from the group consisting of a high nucleocytoplasmic ratio, an endogenous alkaline phosphatase activity, an endogenous telomerase activity, and a reactivity with specific antibodies selected from the group of antibodies SSEA-1 (TEC01) and EMA-1.
69. (New) The method of claim 58, wherein the cells used in step (a) are obtained from blastodermal disks of fertilized eggs in a culture medium

comprising at least one cytokine, b-FGF and SCF, said cells being inoculated into a lawn of feeder cells, incubated, and then collected.

70. (New) The method of claim 58, wherein step (b) comprises the progressive withdrawal of each growth factor added to the primary medium in step (a), in that with each successive passage, the culture medium is free of at least one of said factors until the medium is free of all said factors.
71. (New) The method of claim 58, further comprising the step of (d) proliferating cells derived from the lines obtained in step (c) in a basic medium selected from the group of medium consisting of DMEM, GMEM, HamF12 and McCoy, wherein the medium is supplemented with various additives selected from the group consisting of nonessential amino acids, vitamins and sodium pyruvate.
72. (New) A method for producing avian stem cell lines, the method comprising culturing avian embryonic stem cells in successive passages of a culture medium, wherein in at least the first passage,
  - (a) the avian embryonic stem cells are cultured in a primary medium comprising:
    - (i) at least the growth factors (trophic factors) SCF, IGF-1 and bFGF, and at least one cytokine selected from the group of LIF, IL-11, IL-6, CNTF, oncostatin and cardiotrophin; and
  - (b) the avian embryonic stem cells are inoculated in high density into bacteriological dishes; then cultured in successive passages of diluted primary medium, thereby
  - (c) producing adherent or nonadherent cell lines.